

ARTBOTICS

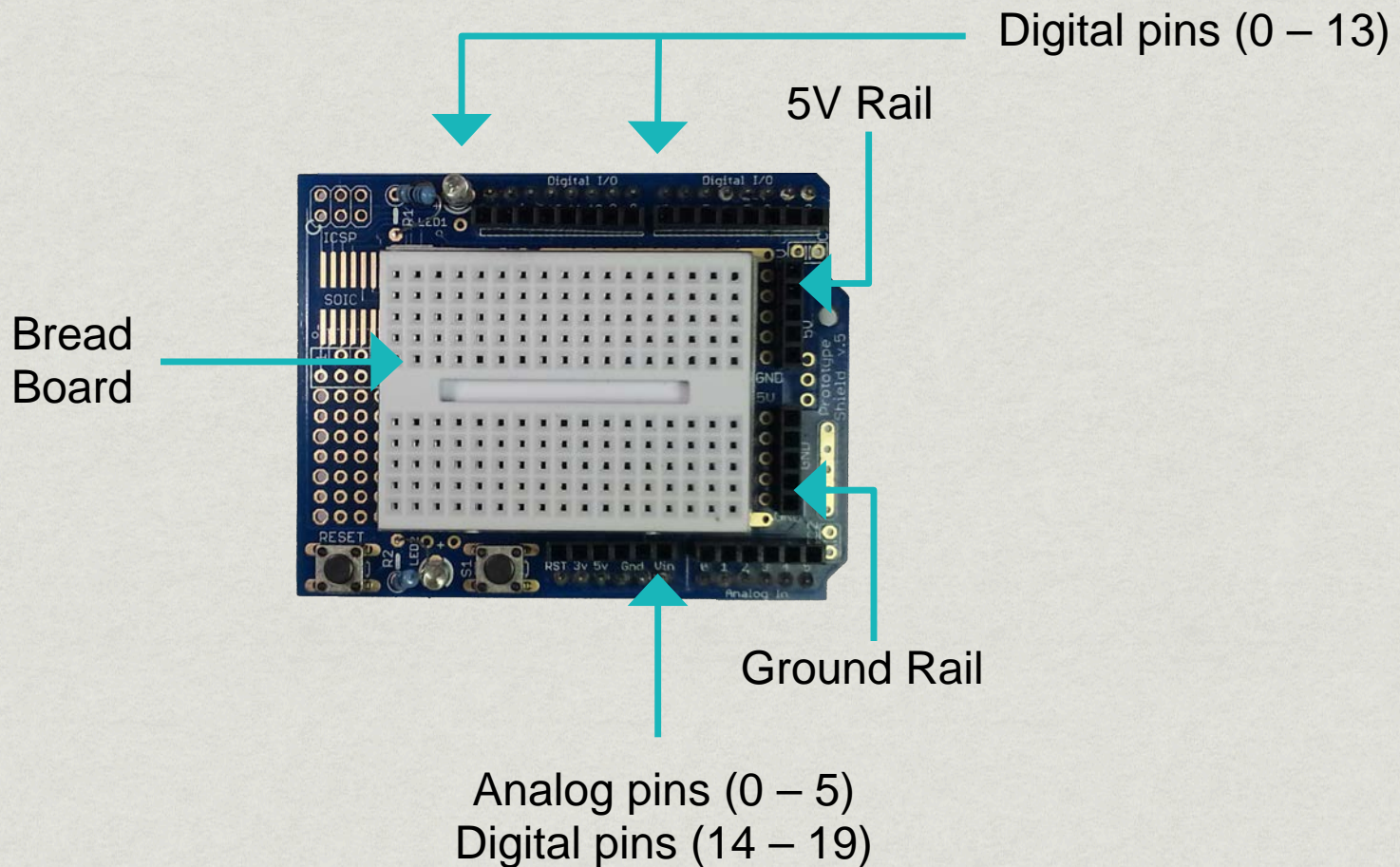
Programming with Arduino

Reacting to Sensors



Arduino Proto Shield

Shield on top of the Arduino that can control sensors



Reacting to Sensors



Button

Boolean, on/off
Pressed = True
Unpressed = False



Range Sensor

Variable, 0 – 1023
Closer = higher value
Further = lower value



Light Sensor

Variable, 0 – 1023
Lighter = higher value
Darker = lower value



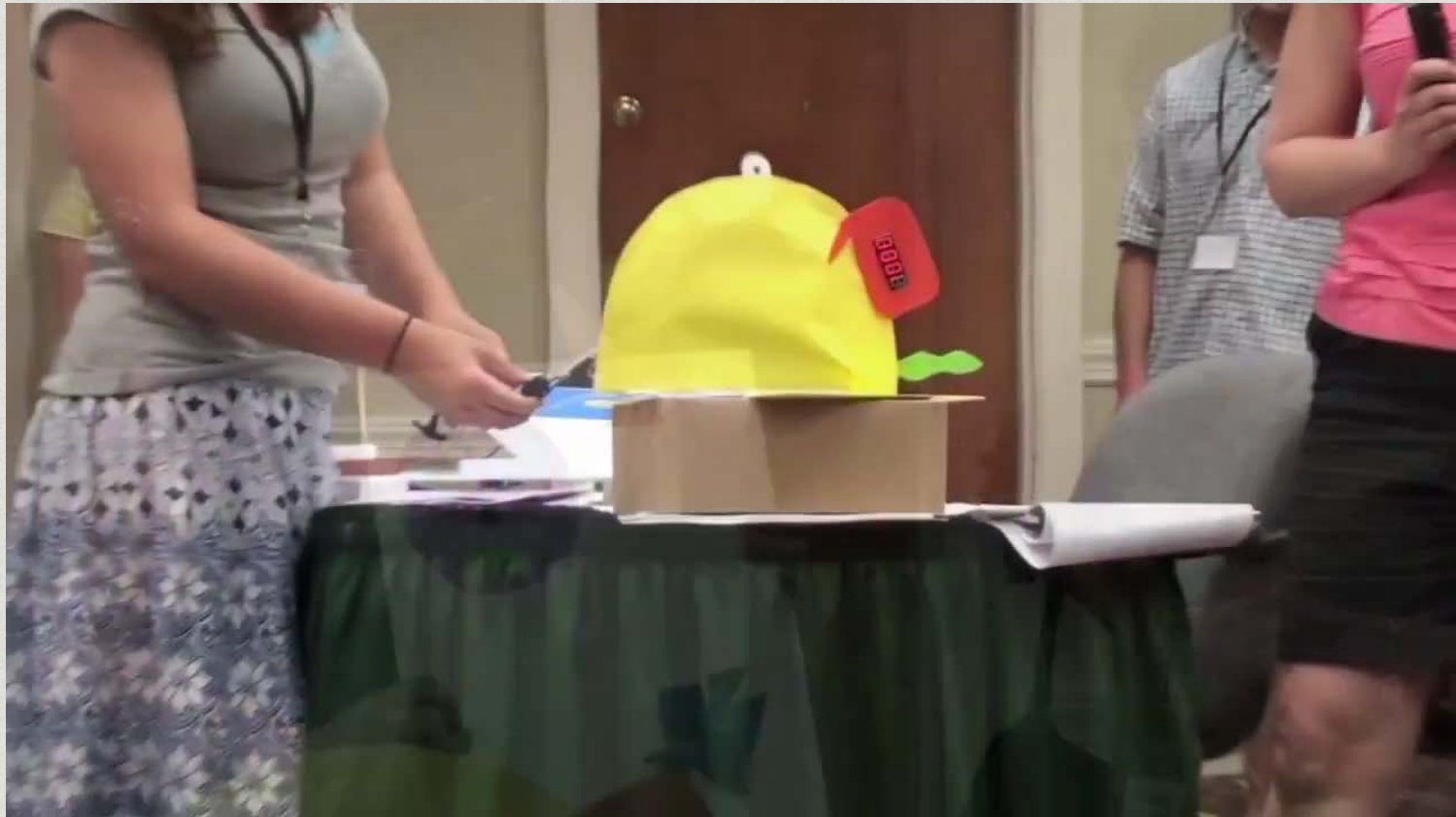
Hookup wires



Resistor

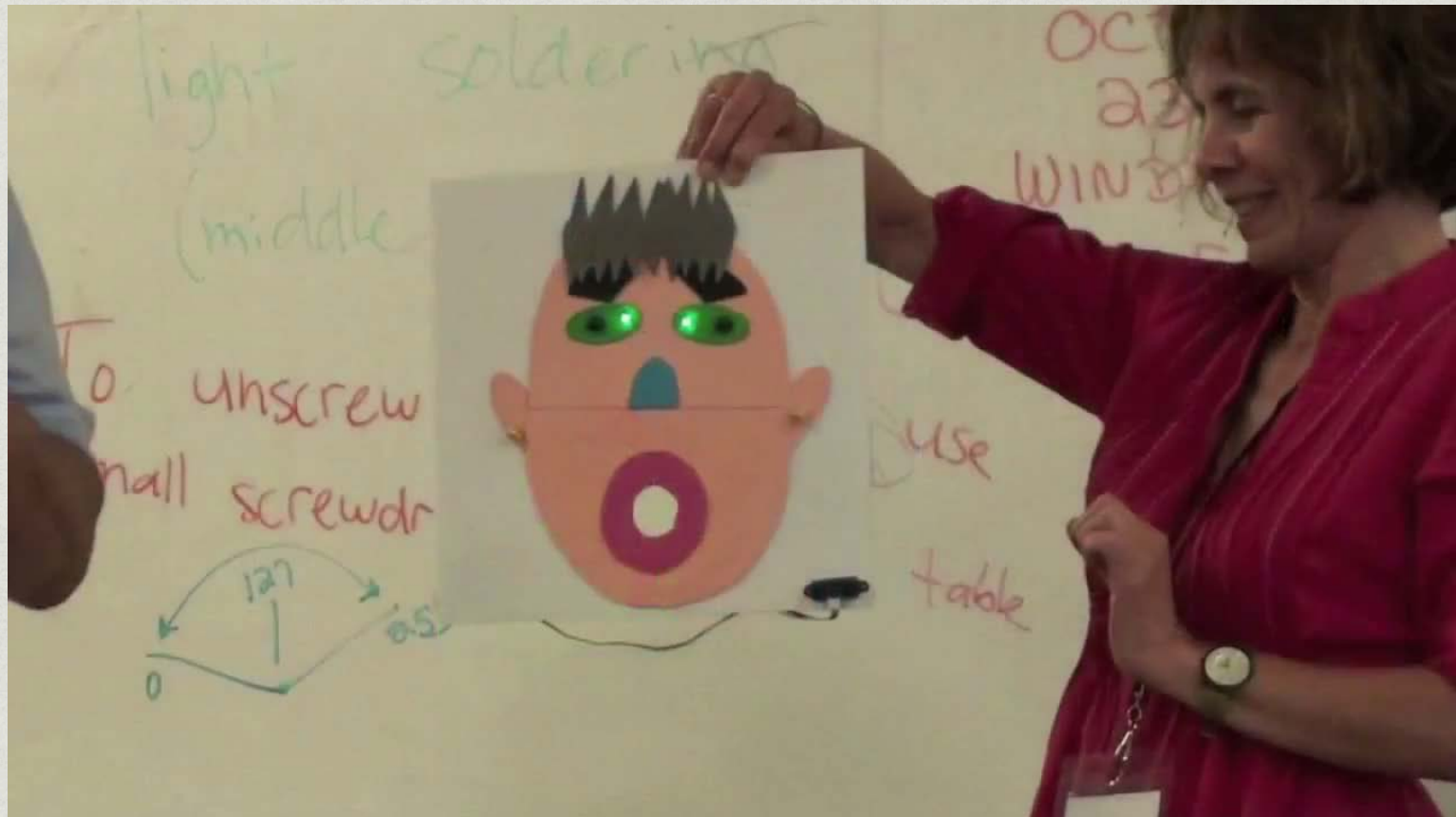
Button

Boolean value: true or false, on or off



Range Sensor

Variable; far - close



Light Sensor

Variable; light - dark



Reacting to Sensors

- Each sensor uses three hookup wires that plug into the proto shield
- The “Reacting to Sensors” handout will show you how to plug in each sensor
- We encourage you to experiment with all three sensors! Find the right one to use with your project

Reacting to Sensors



```
Button button(pin);
```

```
if(button.getButtonState()) {commands}
```



```
Sensor rangeSensor(pin);
```

```
Serial.print(rangeSensor.getReading());
```

```
if(rangeSensor.getReading() >= 300) {commands}
```



```
Sensor lightSensor(pin);
```

```
Serial.print(lightSensor.getReading());
```

```
If(lightSensor.getReading() <= 100) {commands
```